Column 444

Good data means better protection for vulnerable shorebirds

by Erling Friis-Baastad

Each spring elegant little shorebirds return from their wintering grounds to the northern reaches of the Yukon Territory. There they court, breed and raise their young. It's a natural pattern that has likely repeated itself over centuries, perhaps over millennia.

These days, however, shorebirds are facing increased stress, particularly along their migratory routes. In fact, many species appear to be in decline and are a serious conservation concern.

A semipalmated sandpiper on Herschel Island scans the mud looking for invertebrate food to fuel its journey to South American wintering grounds.

(photo: C.D. Eckert)

In June a handful of scientists headed into the North to conduct a survey to help determine just what is happening.

Whitehorse-based ornithologist Pam Sinclair of the Canadian Wildlife Service was part of a four-person team, made up of three Yukoners and a researcher from Parks Canada out of Inuvik, who spent five days crisscrossing plots of tundra, seeking shorebirds.

Their work is part of a North American initiative called Program for Regional and International Shorebird Monitoring.

"The goal of the overall program is to try and address some of the conservation issues for shorebirds, including trying to get better estimates of their populations," says Sinclair.

"We have quite a few different kinds of shorebirds in the Yukon, especially on the coastal plain," she adds.

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"When you look into the life history and what they do it's really quite incredible. Some of them migrate vast distances. They will breed in the Arctic and then migrate down to South America."

Some pass over huge stretches of water, which means they will fly as much as 4,000 kilometres non-stop.

One of Sinclair's favourites of this taxonomic group -- generally recognized by their long bills and legs -- is the beautiful American golden-plover. This bird flies across North America to somewhere in or near Nova Scotia then takes to the air for a long flight deep into South America.

"This is a bird that weighs anywhere from a quarter pound to half a pound; it's just amazing."

As if a shorebird's travel demands aren't taxing enough, when they are in the Yukon they must lay eggs, "almost always four," says Sinclair. "And the total mass of four eggs is, in many cases, approximately equal to the mass of the female."

"Think in human terms. It's like producing a 100-pound baby every year."

With such travel and reproductive demands, any added environmental stresses probably weigh heavily on shorebirds, she says.

"They really need their food to be in the right place at the right time in order the make these flights and gain enough energy to lay their eggs."

Timing is of the essence. The birds cannot linger too long in the wintering grounds or on their migratory routes to make up for any shortage in their usual invertebrate fare, critters they extract from beach muck with their long bills. Breeding, "of course, has to happen at a certain time of year or it just won't work."

Timing is of the essence for the survey crews too. Sinclair and her colleagues were on the Yukon's north coastal plain from June 7th to 11th, when there were still significant patches of melting snow on the tundra, and not much in the way of greenery.

"We aim to time the [field survey] for the beginning of laying the eggs. At that time, the males are still doing a lot of displaying. Once the birds have laid their eggs and are incubating, they don't make as much noise."

"We did 26 plots right from the Northwest Territories border, the edge of the Mackenzie Delta, all the way to the Alaska border," says Sinclair.

"Our surveys were of rectangular plots 300 metres by 400 metres. We had 26 of these across the North Slope."

The surveyors stayed on Herschel Island. "Each day we would helicopter to our

various sites. Each crew would take one of these sites and basically we'd walk back and forth observing and recording birds and their behaviour."

"We're focusing on shorebirds, but since we are out there, we record all the birds that we observe." These other birds, 32 species in all, included the red-throated loons, three species of jaegers, Lapland longspurs and short-eared owls.

But the shorebirds were the stars of the show, and the ones most eagerly sought were those that were nesting within the plots.

How do the researchers know when a bird is nesting rather than just passing through?

Nests, of course, are obvious clues, but behaviour is very informative. Shorebirds will feign injury to lure interlopers away from the eggs or young. And males often display elaborate courtship behaviour.

"Some are quite bizarre," says Sinclair. "The stilt sandpiper flies around flapping his wings in slow motion, making sounds like a donkey braying."

"The pectoral sandpiper inflates his throat so he looks like he's flying around with a golf ball stuck in his throat -- and making a low booming noise."

Sinclair's team found nine different shorebird species within their plots. Of them two, the American golden-plover and the whimbrel, are considered of high conservation concern in North America, she says. Four -- the red-necked phalarope, semipalmated sandpiper, stilt sandpiper and Wilson's snipe -- are of moderate conservation concern.

Habitat loss is a big issue for the birds. "Many of these species feed on beaches and, of course, there are a lot of land-use conflicts in coastal areas." Along the flyways, wetlands, where migrating birds rest and feed, are disappearing in the face of rapid development.

While migrating birds have always been at the mercy of storms, "increased storm activity that's predicted with global warming... can really be trouble for these long-distance migrants," says Sinclair.

The Yukon North Slope survey was part of a larger survey and over the winter statisticians and others will pore over the summer's data to try and determine which populations are the most vulnerable and where conservation activities must be stressed.

While Sinclair will likely be working on other projects over the winter, she plans to take part in another survey on the North Slope next year. More data will be added to refine the figures and, with any luck, she and her colleagues will spot the rare buff-breasted sandpiper, red phalarope and ruddy turnstone, species that didn't appear on the surveys this year.

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